



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

FINANCE
SUPPLY CHAIN MANAGEMENT

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Supply Chain Management

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NOTICE TO TENDERERS NO: 1
Pages: 9

11 April 2022

TENDER NUMBER: 270Q/2021/22

DESCRIPTION: TENDER FOR DESIGN, MANUFACTURE, SUPPLY AND INSTALLATION OF 132 KV UNDERGROUND CABLE AND ACCESSORIES FOR MORGEN GRONDE, TRIANGLE & BELLVILLE SOUTH

CLOSING DATE OF TENDER: 26 April 2022
BOX NUMBER: 146

Dear Sir/Madam

SITE CLARIFICATION MEETING AND AMENDMENTS TO THE CONTRACT DOCUMENT

(1) Amendments to Document

Your attention is specifically drawn to the amendments which are to be made to the Contract Document for the above in terms of Clause C.3.2 of the Standard Conditions of Tender and you will be deemed to have made any allowances necessary to provide for these amendments in your tender offer.

PAGE 63: (DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS)

Tenderers to note that page 63 of Volume 3A: Part C3.4.2.4: Drawings, Operating and Maintenance Instructions, be replaced with the attached page. Two additional drawings added.

PAGE 162: (Schedule 27.1: Technical Requirements and Data Sheets)

Tenderers to note that page 162 Volume 2: Returnable Documents, T2.2, Returnable Schedules, be replaced with the attached page. The sheath temperature and sheath standing voltage requirements have been amended.

PAGE 165: (Schedule 27.1: Technical Requirements and Data Sheets)

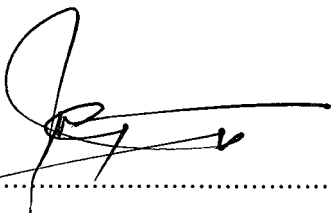
Tenderers to note that page 165 Volume 2: Returnable Documents, T2.2, Returnable Schedules, be replaced with the attached page. The sheath standing voltage requirements have been amended.

2) SITE CLARIFICATION MEETING

The minutes of the non-compulsory site clarification meeting are attached.

Tenderers are to return a signed copy of this notice/addendum with the submission of their Tender. Failure to return a signed copy of the Addendum may result in the Tender being declared Non-Responsive.

Yours faithfully,



For: Basil Chinasamy

Director: Supply Chain Management

WRITTEN ACKNOWLEDGEMENT OF RECEIPT OF NOTICE 1 – 270Q/2021/22

Signature Date

Legal and full name of tendering entity:

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C3.4.2.4 Drawings, Operating and Maintenance Instructions

The following drawings are applicable to the contract and are issued with this tender document and will form part of the Contract Documents:

DRAWING NUMBER	DESCRIPTION
SK 5085	Typical arrangement of fibre optic termination
SK 3696 Sheet 3	Single & Trefoil cleats for cables
DS3 Sheet 4A Rev. 3	Details of type "L" cable duct section (flat 210mm)
DS3 Sheet 5 Rev. 1	Details of type "L" cable duct section (trefoil 160mm)
Figure: D1	Temporary above ground fuel tanks
EM5	Fencing detail for protection of trees.
RD16.1	Reinstatement of shallow trenches in road reserves trenches in roadways
RD16.2	Reinstatement of shallow trenches in road reserves trenches in roadways

1 DRAWINGS

- 1.1 All drawings shall be to scale not less than 1:50 and fully detailed. All important dimensions shall be given and the material of which each principal part is to be constructed shall be indicated. All dimensions marked on the drawings shall be considered correct although measurement by scale may differ therefrom. Drawings shall not exceed size A0 standard dimensions and shall bear approved contract references.
- 1.2 Three copies of all documents shall be submitted. The Contractor shall supply any further copies required by the Engineer.
- 1.3 A register of all the Contractor's documents shall be provided with each submission.
- 1.4 Drawings shall be prepared in accordance with the latest issue of SANS 10111. An equivalent international code of engineering drawing practice will also be acceptable.
- 1.5 Drawings shall be to scale, with both the scale and the drawing being large enough to clearly show all relevant components of the plant and equipment.
- 1.6 In addition to the usual plan and two side elevations, sufficient additional sections shall be included to clearly show the arrangement of all plant and equipment.
- 1.7 Item lists shall be provided on the drawing or on a separate parts list.
- 1.8 Drawings for approval shall be submitted in duplicate as black line prints on a light background and, on approval, four further copies shall be supplied. On completion of work on site all drawings shall be revised where necessary to show the equipment as installed and two copies submitted for approval. The Contractor shall supply for the Employer's own use 5 sets of all drawings bound in individual files. The general arrangement, section, wiring and schematic diagrams shall also be provided on CD-ROM in a format compatible with AutoCAD 2012 as well as on a separate CD-ROM with the drawings in Adobe pdf format. The directory structure shall be to approval.

CITY OF CAPE TOWN
ELECTRICITY GENERATION AND DISTRIBUTION
CONTRACT NO. 270Q/2021/22: DESIGN, MANUFACTURE, SUPPLY AND INSTALLATION OF 132 KV
UNDERGROUND CABLE AND ACCESSORIES FOR MORGEN GRONDE, TRIANGLE & BELLVILLE SOUTH

SCHEDULE 27.1: TECHNICAL REQUIREMENTS AND DATA SHEETS Cont'd

3. 132 kV POWER CABLES

Item No.	Description	Requirements	Particulars of equipment offered	
			50 MVA	300 MVA
1	Nominal voltage between phases of three-phase circuit, U_0 kV	132		
2	System highest voltage, U_m kV	145		
3	System frequency Hz	50		
4	Earthing of system neutral	Solid		
5	Maximum system symmetrical fault level (single and three phase) which the completed installation, conductor and metallic sheath must be capable of withstanding:			
5.1	Short circuit current kA.1s	40		
5.2	Asymmetrical crest factor	2,5		
6	Maximum dielectric stress at the conductor kV/mm	7,8		
7	Maximum permissible conductor temperature °C	90		
8	Maximum permissible sheath temperature			
8.1	With one feeder in service at rated transfer capacity °C	300 MVA: 70 – 75 50 MVA: 50		
8.2	With two feeders in service at rated transfer capacity °C	50		
9	Maximum sheath standing voltage at rated current V	65		
10	Impulse withstand level of cable termination and cable kV _p	650		
11	Power frequency withstand level of cable	To IEC 60840		
12	Maximum partial discharge level measured at 1,5 U_0 (Type and Routine test) pC	5		
13.1	Circuit configuration and spacing	XXXXX		
13.2	Maximum trench width mm	2 000		
14	Feeder power transfer rating under site conditions (Refer to clause 5.1 of the Specification) Maximum design rating with one three-phase feeder only on load			
14.1	In ground MVA	50/300		
14.2	In ducts MVA	50/300		
14.3	At the terminations MVA	50/300		

TENDERER'S SIGNATURE: _____

DATE: _____

CITY OF CAPE TOWN

ELECTRICITY GENERATION AND DISTRIBUTION

CONTRACT NO. 270Q/2021/22

DESIGN, MANUFACTURE, SUPPLY AND INSTALLATION OF 132 KV UNDERGROUND CABLE AND ACCESSORIES FOR MORGEN GRONDE, TRIANGLE & BELLVILLE SOUTH

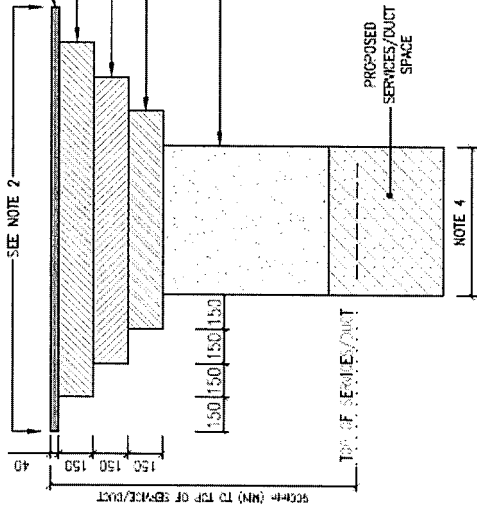
SCHEDULE 27.1: TECHNICAL REQUIREMENTS AND DATA SHEETS Cont'd

3. 132 kV POWER CABLES (Continued)

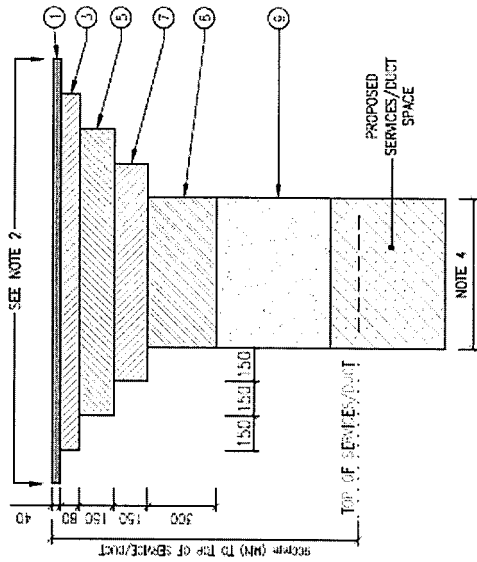
Item No.	Description	Requirements	Particulars of equipment offered	
			50 MVA	300 MVA
26	Short-circuit rating of metallic sheath EXCLUDING sheath wires kA	XXXX		
27	Nominal cross-sectional area of conductor mm ²	XXXX		
28	Conductor details:			
28.1	Material	XXXX		
28.2	Shape	XXXX		
29	Maximum dielectric stress at U ₀			
29.1	At the conductor screen kV/mm	XXXX		
29.2	At the earthed core screen kV/mm	XXXX		
30	Minimum radial thickness of main insulation mm	XXXX		
31	Maximum sheath standing voltage:			
31.1	at rated load transfer V	XXXX		
31.2	at maximum cable design rating V	65		
32	Minimum radial thickness of metallic sheath mm	XXXX		
33	Nominal diameter over metallic sheath mm	XXXX		
34	Anti-corrosion covering:			
34.1	Minimum average thickness mm	XXXX		
34.2	Minimum thickness mm	XXXX		
34.3	Insulation resistance at 10 kV at Works corrected to 20°C MΩ/km	XXXX		
35	Nominal overall diameter of completed cable mm	XXXX		
36	Nominal mass of completed cable kg/m	XXXX		

TENDERER'S SIGNATURE: _____

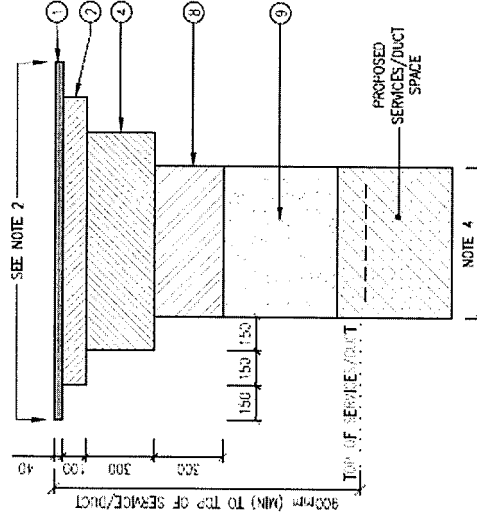
DATE: _____



TYPE A1
CLASS 5B-D ROADS
(LOCAL RESIDENTIAL STREETS)



TYPE A2
CLASS 5A & 4 ROADS
(LOCAL COMMERCIAL STREETS & COLLECTORS)



TYPE A3
CLASS 2 & 3 ROADS
(ARTERIALS)

NOTES:

1. THE SPECIFIED LAYER WORKS SHOULD BE CONSIDERED AS A GUIDELINE. ONCE THE EXISTING LAYER WORKS OF THE ROADWAY HAVE BEEN DETERMINED, THE ENGINEER SHALL SUBMIT A FINAL LAYER WORKS REINSTATEMENT PROPOSAL TO THE APPROVAL AUTHORITY.
2. ASPHALT SURFACE LAYERS SHALL BE MECHANICALLY SAW CUT PRIOR TO THE BREAKING UP OF THE EXISTING LAYERS AND AGAIN BEFORE THE PLACING OF THE FINAL ASPHALT LAYER.
3. ASPHALT JOINTS:
 - 3.1. JOINT SHALL BE CUT IN STRAIGHT LINES, PARALLEL OR AT RIGHT ANGLES TO THE CENTERLINE, USING A MECHANICAL SAW CUT.
 - 3.2. LONGITUDINAL ASPHALT JOINTS SHALL NOT BE POSITIONED IN ANY VEHICLE WHEEL-PAATHS. JOINTS SHALL BE POSITIONED ON THE LAINE MARKING.
 - 3.3. CUT EDGES OF ASPHALT JOINTS SHALL RECEIVE A COAT OF RUBBERIZED BITUMEN EMULSION ALONG THE ENTIRE VERTICAL FACE, PRIOR TO THE ASPHALT BEING PLACED.
 - 3.4. REFER TO SECTION 8.5.3 FOR FURTHER DETAILS.
 - 3.5. ALL "COLD" ASPHALT JOINTS TO BE PROPERLY SEALED WITH A WATERPROOFING SEALANT TO PREVENT THE INGRESS OF WATER. THE SEALANT SHALL BE UNDILUTED AND BRUSH-APPLIED AT 0.7L/m^2 AT A MINIMUM WIDTH OF 100mm.
4. TRENCH WIDTH SHALL DEPEND ON THE REQUIRED SERVICE TO BE INSTALLED.
 - 4.1. FOR STORMWATER, SEWER AND WATER SERVICES, SUFFICIENT SIDE ALLOWANCE SHALL BE PROVIDED, TO ENSURE ADEQUATE COMPACTION.
 - 4.2. FOR SERVICE DUCTS, REFER TO CHAPTER 13 FOR THE VARIOUS DUCT TYPE REQUIREMENTS AND SPECIFICATIONS.

ROAD LAYER WORKS:

- ① 40mm CONTINUOUSLY GRADED ASPHALT SURFACING (93% MAX VOIDLESS DENSITY)
- ② 100mm CONTINUOUSLY GRADED BTE (93% MAX VOIDLESS DENSITY)
- ③ 80mm CONTINUOUSLY GRADED STB (93% MAX VOIDLESS DENSITY)
- ④ 300mm C3/C4 CEMENT STABILIZED SUBBASE, CONSTRUCTED IN TWO LAYERS OF 150mm (96% MOD)
- ⑤ 150mm C3 BASE (98% MOD)
- ⑥ 150mm C4 BASE (98% MOD)
- ⑦ 150mm C5 SURBASE (95% MOD)
- ⑧ G7 SELECTED LAYER, CONSTRUCTED IN 150mm LAYERS (93% MOD, 100% FOR SAND)
- ⑨ G9 BACKFILLING, COMPACTED IN 150mm LAYERS (90% MOD, 100% FOR SAND)

NOTES: ADEQUATE SAND OR GRANULAR MATERIAL, ALL OF NON-COHESIVE NATURE AND FREE FROM ALL ORGANIC MATERIAL OF WHICH THE GRADING ANALYSES SHOWS 100% PASSING A 15.0mm SIEVE AND NOT MORE THAN 5% PASSING A 0.075mm SIEVE SHOULD BE TYPE FOR ASPHALT LAYERS (SURFACING & BASE) SHALL BE SPECIFIED IN FINAL PROPOSAL

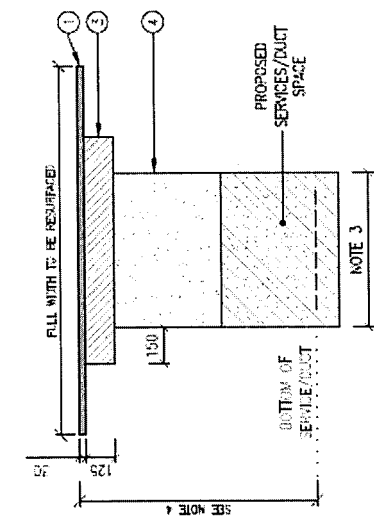
ROAD CLASSES:

- CLASS 1: MAJOR ARTERIAL
- CLASS 2: MAJOR ARTERIAL
- CLASS 3: MAJOR ARTERIAL
- CLASS 4: MAJOR ARTERIAL
- CLASS 5A: LOCAL COMMERCIAL STREET
- CLASS 5B: LOCAL RESIDENTIAL STREET
- CLASS 6: LOCAL RESIDENTIAL STREET

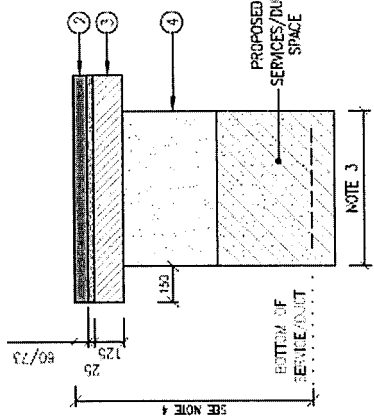
SHEET INDEX:

- SHEET 1: ROADWAY REINSTATEMENT EXPLANATION
- SHEET 2: ELECTRICAL REINSTATEMENT EXPLANATION

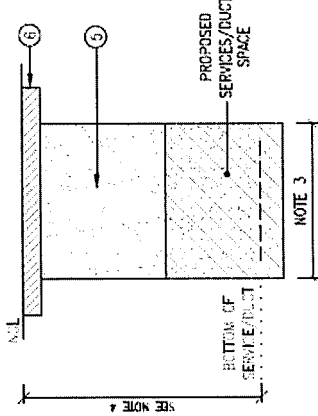
 CITY OF CAPE TOWN ISIXEKO SASAKHAPA SIYALISA KAPPA CITY OF CAPE TOWN URBAN MOBILITY	TITLE		REINSTATEMENT OF SHALLOW TRENCHES IN ROAD RESERVES TRENCHES IN ROADWAYS		STANDARDS AND GUIDELINES DETAILS	
	SHEET 1		SHEET 1		SHEET 1	
	PAPER		SCALE		DRAWING No.	
	A4		N.T.S.		RD16.1	
	REV		C			



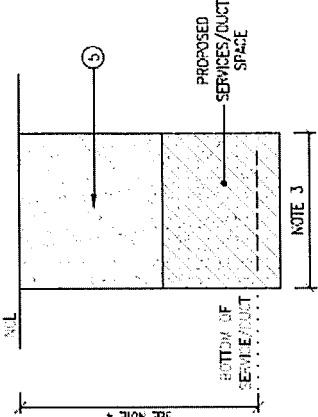
**TYPE B1:
PEDESTRIAN FOOTWAY
(ASPHALT)**



**TYPE B2:
PEDESTRIAN FOOTWAY
(SEGMENTED PAVING)**



**TYPE B3:
STABILISED GRAVEL WC**



**TYPE B4:
UNMADE VERGE**

NOTES:

- THE SPECIFIED LAYER WORKS SHOULD BE CONSIDERED AS A GUIDELINE. ONCE THE EXISTING LAYER WORKS OF THE ROADWAY HAVE BEEN DETERMINED, THE ENGINEER SHALL SUBMIT A FINAL LAYER WORKS REINSTATEMENT PROPOSAL TO THE APPROVAL AUTHORITY.
- WHERE THE WIDTH OF THE FOOTWAY IS LESS THAN 2m, THE ENTIRE WIDTH OF THE SURFACING SHALL BE REPLACED (ONLY APPLICABLE TO ASPHALT FOOTWAYS)
- ASPHALT JOINTS:
 - ALL JOINTS SHALL BE SAW CUT PRIOR TO THE PLACING OF THE NEW ASPHALT LAYER.
 - ALL JOINTS SHALL BE CUT PERPENDICULAR ACROSS THE FOOTWAY (NO DIAGONAL JOINTS SHALL BE ACCEPTED)
 - REFER TO SECTION 8.5.3 FOR FURTHER DETAILS.
 - ALL "COLD" ASPHALT JOINTS TO BE PROPERLY SEALED WITH A WATERPROOFING SEALANT TO PREVENT THE INGRESS OF WATER. THE SEALANT SHALL BE UNDILUTED AND BRUSH-APPLIED AT $0.7\text{L}/\text{m}^2$ AT A MINIMUM WIDTH OF 100mm.
- TRENCH WIDTH SHALL DEPEND ON THE REQUIRED SERVICE TO BE INSTALLED.
 - FOR STORMWATER, SEWER AND WATER SERVICES, SUFFICIENT SIDE ALLOWANCE SHALL BE PROVIDED, TO ENSURE ADEQUATE COMPACTION.
 - FOR SERVICE DUCTS, REFER TO CHAPTER 13 FOR THE VARIOUS DUCT TYPE REQUIREMENTS AND SPECIFICATIONS.
- TRENCH DEPTH:
 - SHALL BE LIMITED TO 1m FOR TELECOMMUNICATION SERVICES
 - WHERE UNSTABLE GROUND CONDITIONS EXIST, SHORING/PROTECTION SHOULD BE APPLIED IN ORDER TO PROTECT ADJACENT STRUCTURES

PEDESTRIAN FOOTWAY LAYER WORKS:

- 30mm CONTINUOUSLY FINE GRADED ASPHALT SURFACING
- 60/73 PAVING FLOCKS ON 25mm SAND
- 120mm GS SUB-BASE COMPACTED TO 95% MDD
- 69 BACKFILLING COMPACTED IN 150mm LAYERS (90% MDD, 100% FOR SAND)
- BACKFILL MATERIAL TO BE COMPACTED TO 90% OF MDD IN LAYERS NOT EXCEEDING 300mm
- 75mm STABILISED GRAVEL WEARING COURSE (3-4% CEMENT BY MASS)

NOTES: AGGREGATE SAND OR GRANULAR MATERIAL, ALL OF NON-COHESIVE NATURE AND FREE FROM ALL ORGANIC MATERIAL OF WHICH THE GRADING ANALYSES SHOWS 100% PASSING A 13.2mm SIEVE AND NOT MORE THAN 5% PASSING A 0.075mm SIEVE
UNDER TYPE FOR ASPHALT SURFACING SHALL BE SPECIFIED IN FINAL PROPOSAL

SHEET INDEX:
SHEET 1: ROADWAY REINSTATEMENT - REPAIR AND
SHEET 2: PEDESTRIAN FOOTWAY REINSTATEMENT - REPAIR AND

 CITY OF CAPE TOWN ISIXENKO SASEKAPA STAD KAAPSTAD		TITLE	
REINSTATEMENT OF SHALLOW TRENCHES IN ROAD RESERVES TRENCHES IN PEDESTRIAN FOOTWAYS AND VERGES		SCALE	PAPER
		N.T.S.	A4
		DRAWING No.	REV
CITY OF CAPE TOWN URBAN MOBILITY		RD16.2	C
STANDARDS AND GUIDELINES DETAILS		SHEET 2	

**TENDER 270Q/2021/22: DESIGN, MANUFACTURE, SUPPLY AND
INSTALLATION OF 132 KV UNDERGROUND CABLE AND ACCESSORIES FOR
MORGEN GRONDE, TRIANGLE & BELLVILLE SOUTH**

TENDER CLARIFICATION MEETING

Date: 2022-04-06

Time: 11:00

Venue: Skype Meeting

1 PRESENT

Tenderers

Skype meeting

City of Cape Town (CCT)

J van der Merwe

F Esau

E Osborne

S Rautenbach

G Ackerberg

2 DISCUSSION POINTS

- 2.1 The clarification meeting was a non-compulsory meeting. Furthermore, it was an opportunity to emphasize certain key aspects of the tender and clarify areas of uncertainty. Thus it was not a comprehensive discussion of the tender document.
- 2.2 Unless a formal notice is issued by the CCT, the tender document is to be viewed as correct. Anything stated at the clarification meeting that could alter the tender document is therefore not enforced unless it is contained in a formal notice to tenderers.
- 2.3 The tender must be completed in non-erasable black ink, by hand. The only exception is the Schedule of Rates, which may be completed electronically. If the tenderer wishes to complete these documents electronically, the electronic copy must be an EXACT replica of the tender document.
- 2.4 Every item included in the Schedule of Rates must be priced. No partial submission will be accepted. Any partial submission will be deemed non-responsive.
- 2.5 Tenderers should take note of the local content requirements as specified. If any of the requirements cannot be met tenderers must apply for exemption from the DTI (BMamba@thedti.gov.za , MaLebea@thedti.gov.za , CMatidza@thedti.gov.za) and proof of exemption must be submitted with the tender document.

- 2.6 Estimated quantities are set out in the Schedules of Rates. The final Contract Price shall be computed from the actual quantities of work done.
- 2.7 Tenderers must note that wherever this document refers to any particular trade mark, name, patent, design, type, specific origin or producer, such reference shall be deemed to be accompanied by the words "or equivalent".

3 Items highlighted

3.1 Eligibility:

- CIDB Grading of at least 8EP
- Compliance with CCT SCM Policy and Procedures
- Good standing with Bargaining Council
- Local content
- Key Personnel
- Track Record
- Type test certificates

3.2 The scope consists of 3 different sections:

Stikland – Morgen Gronde

- New cable: Stikland – Morgen Gronde SwStn
- Move existing Stikland - Morgen Gronde MS to Morgen Gronde SwStn

Morgen Gronde – Triangle

- New cable: Morgen Gronde SwStn – Triangle SwStn
- Reclaimed cable - Triangle MS to Triangle SwStn

Triangle – Bellville South

The energising of sections are dependent on completion of Morgen Gronde Switching Station and Triangle Switching Station. Some of the installation work can be done concurrently but sections will have different start and completion dates.

Johanette Van der Merwe Digitally signed by Johanette Van der Merwe
Date: 2022.04.08 16:23:18 +02'00'

J van der Merwe

Date: 2022/04/06